# NON-PERFORMING ASSETS IN INDIAN BANKS-AN OVERVIEW

**Dr. Natika Poddar***

**Abstract:**

The problem of non-performing assets has affected the entire Indian banking sector adversely. NPAsaffects the profitability, capital adequacy ratio and credibility of banks. The problem of non-performing assets (NPAs) is one of the serious problems that have shaken the entire banking industry. A well-built banking sector is significant for a prosperous economy. The crash of the banking sector may have an unfavorable impact on other sectors. A banker shall be very cautious in lending, because banker is not lending money out of its own capital. A major portion of the money lent comes from the deposits received from the public and government share. At present NPA in the banking sector is a very debatable topic because NPA is increasing year by year particularly in nationalized banks.The problem of losses and lower profitability of Non-Performing Assets (NPAs) and liability mismatch in banks and financial sector depend on how various risks are managed in their business. Besides capital to risk weighted assets ratio of Public and Private sector banks, management of credit risk and measures to control the menace of NPAs are also discussed. An attempt is made in this paper to analyze the factors contributing to NPAs, the magnitude of NPAs, reasons for high NPAs and their impact on Indian banking operations, relationship between non-performing assets and business cycles ,GDP, Interest rates etc. and to provide suitable suggestions to reduce NPAs in commercial banks. This paper also makes an attempt to study the most significant factors contributing towards the problem of Non-performing assets from the point of view of top bankers from public sector banks in India, some foreign banks and the measures required for the management of NPAs.

***Acknowledgment:*** I am grateful to Director Dr.S.S.Mohanty (SFIMAR) for critical review of my paper and for the suggestions which he has made for improving quality of paper.

---

* **Associate professor- Finance(St.Francis Institute of Mgmt and Research)**

## 1. INTRODUCTION

India is emerging as a high growth economy that has shown strong resilience to the global slowdown in the recent past.Banks has influenced economies for centuries. Banks are the ones which keep the wheels of economy and industry moving. Banks are the pillars of the any economy. There has been a drastic and revolutionary change in the banking industry since globalization and liberalization. The scenario of the Banking Industry is also undergoing a significant change due to changes in the economic conditions worldwide. In India Banking industry has witnessed revolutionary change since independence. They have expanded their activities from mere traditional functions of accepting deposits from the public and lending the same to public at large. From 1990 onwards even this sector has experienced certain deregulations which have definitely helped this sector to become a key player in the development of economy. Increasing demand for finance from the corporate sector to meet their expansion & diversification programme ,good opportunities in the stock market,increasing credit demand from retail sector have made this sector very vibrant. Non-Performing Assets (NPAs) have been plaguing in the Indian financial sector for a long time, but were not in the public domain until the early nineties. By that time a significant number of loan assets involving uncertainty with respect to their repayments had piled up, creating concerns with the decision makers about the health of the Indian banking and financial sectors. NPAs reflect natural waste in any economy.

Banking sector successfully operates on the cycle of cash inflow and cash outflow. Any disturbance in this cycle may affect working of this sector. The major role of bank is to extend credit. Simultaneously it also has to successfully recover back the credit which is extended. In some cases the lender may have some doubts of recovery or there might be default on the part of the borrower regarding payment of instalments continuously for a period of 90 days. Such doubtful of recovery or actual default is called as NPA.NPAs has direct impact on profitability and credibility of banks. NPAs are one of the unavoidable problems of any bank. So there is a need to do further research in this area to find out new innovative methods of recovery which help the wheels of banking sector moving at a faster pace.

Loans and deposits are the core business concerns of a bank. It can be said that there is always a risk associated with the loaning activity and this is balanced by the higher interest and the processing fees charged by the bank. It is also important for the bank to protect the interests of the shareholders. The bank must make decisions consistent with the consequences of the risk involved with the loan decision. The normal risk evaluation processes may need to be enhanced substantially to reduce the possibility of default. There is also a need to classify and grade defaulting borrowers based on their loan repayment behavior. Corporate debtors must have a bankruptcy and exiting policy. Individual borrowers need to be covered by sufficient and viable guarantees. It is seen that education loan defaulters are now taking the lead in willful loan defaults. Such defaulters may be put on notice as absconders and criminal cases registered under relevant law duly modified.

Legally registered loan recovery companies may be formed and the doubtful assets provided to them by banks may be put up for recovery through a legally acceptable process of law with the protection of the law enforcement machinery. All of the above needs a closer look and statutes amended to make it harder to default on loans. The problem of bad loans of PSU banks could be broadly divided into these categories:

1) Politically pressured decisions on the loan giving agency by local politicians (Crony associates)

2) Behavior of loan managers to bypass the laid down procedures by diluting due diligence.

3) Defaults due to companies unable to service their loan commitment due to bad business conditions orpenalties by the Govt. for other kinds of non compliance

4) Poor or stymied loan recovery efforts due to court injunctions and delays in court orders

5) Political pressures stymieing the mass loan recovery processes (agricultural loans, loans for the weakersections,etc.

6) Administrative lethargy. Banks have to muster the will to recover loans so as to cover the interests of the hapless depositors. They are the worst hit when a bank goes under.

## 2. REVIEW OF LITERATURE

The main sources of literature review include various websites, selected national and international journals.

**Prashanth K Reddy (2002) made** a comparative study of Non Performing Assets in India in the global context. The study highlights the importance of a sound understanding of the macroeconomic variables and systemic issues pertaining to banks and the economy for solving the NPA problem along with the criticality of a strong legal framework and legislative framework. Foreign experiences must be utilized along with a clear understanding of the local conditions to create a tailor made solution which is transparent and fair to all stakeholders.

**Hanson and Kathuria (2002)** found that the banking system in India was making slow progress in the management of non-performing assets (NPAs) and suggested that improvement must be made to reduce the NPAs.

**He, Dong International Monetary Fund (September 2002) presented a paper on Resolving Non Performing Assets of the Indian Banking Sector.** This paper reviews the nature of NPAs in the Indian banking system and discusses the key design features that would be important for the ARCs to play an effective role in resolving NPAs

**B.K.Reddy(2006)** undertook a study on Non-Performing Assets in Public Sector banks. This study reveals that the gross and net NPAs have gone down gradually from 23.2% and 14.5% from 1993-94 to 7.8% and 3.0% in the year 2003-04, showing the strong commitment of PSBs towards reduction and management of NPAs. The quality of portfolio of the PSBs has improved quite impressively over the period. In a nutshell, NPAs have been coming down in the PSBs as a whole due to the effectiveness of various measures initiated by RBI and GOI. To survive and compete with private and foreign banks, it is crucial for the PSBs to clean up their balance sheets by increasing the equity capital and bring changes in the attitude of the bankers and borrowers.

**International Journal of Economic Practices and Theories (2011)** published a study undertaken by PachaMalyadri, S. Sirisha on a comparative Study of Non-Performing Assets in Indian Banking Industry. The scope of the study is limited to the analysis of NPAs of the public sector banks and private sector banks NPAs pertaining to only weaker sections for the period of seven (7) years i.e. from 2004-2010. It examines trend of NPAs in weaker sections in both public sector and private sector banks

**International Research Journal of Finance and Economics SomanadeviThiagarajan(2011)** attempted to analyze various risk related ratios that could to be useful as an internal risk monitoring tool for the scheduled commercial banks. She also further observed though there are similarity in the trend of certain ratios over the ten year period studied, the sector wise comparison showed there are significant differences between the two sectors with regards to certain key ratios such as total loans to total equity (TL/TE) provisions for loan loss to total NPA (PFLL/NPA) and the NPA to NPA and total equity (NPA/NPA+TE).

**CRISIL Research(2011)**, India's largest independent and integrated research house, estimates that rising interest rates would increase the equated monthly installments (EMIs) of home loan borrowers by about Rs 60 billion annually. Higher EMIs and a slowdown in economic growth would also result in an increase in non-performing assets (NPAs) of financiers. On the other hand, as the teaser loan portfolio gets linked to the prevailing higher market rates starting April 2012, the profitability of financiers will increase. NPAs of financiers are expected to rise on account of a steep rise in the interest outgo for borrowers coupled with the economic slowdown. According to Mr. Prasad Koparkar, Head – Industry and Customized Research, CRISIL Research, *"The NPA levels are expected to go up by around 30 bpsto reach 1.9 per cent by March 2013. However, losses on this account are expected to increase only marginally."*

## 3. OBJECTIVES OF THE STUDY:

1) To know Reasons for high NPAs and their impact on Indian banking operations
2) To analyze relationship between non-performing assets and business cycles (GDP, Interest rates).

3) To know the most significant factors contributing towards the problem of Non-performing assets from the point of view of top bankers from public sector banks in India, some foreign banks and the measures required for the management of NPAs.

## 4. DATA FOR THE STUDY

The data for the study has been collected for the period 2004 to 2013. This periodhas witnessed a full cycle of decline and increase in repo rates. The data required for the study viz.Repo rates, advances, NPA's have been sourced from RBI and State bank of India publications.Repo rates as announced by RBI have been considered as a proxy to the interest rates prevailingin India.

## 5. SAMPLE

There are several banks operating in India with varying degrees of exposure to various sectors. Public sector banks have lion's share of the banking market in India due to a variety of reasons. Even among the public sector banks, the operational dynamics of State bank group is such that itis in an advantageous position compared to nationalized banks.

## 6. LIMITATIONS

1. This study considers only the effect of repo rate on NPA's but does not consider effect of other monetary measures like change in CRR/SLR, change in risk weight of a particular kind ofadvance and other measures adopted by RBI to achieve its objectives.

2. The repo rates applicable as on 30th September and 31st March of the respective years only have been considered. This is because these are the dates set for auditing purposes of the balance sheetof the banks and the position of NPA's pertains to that date.

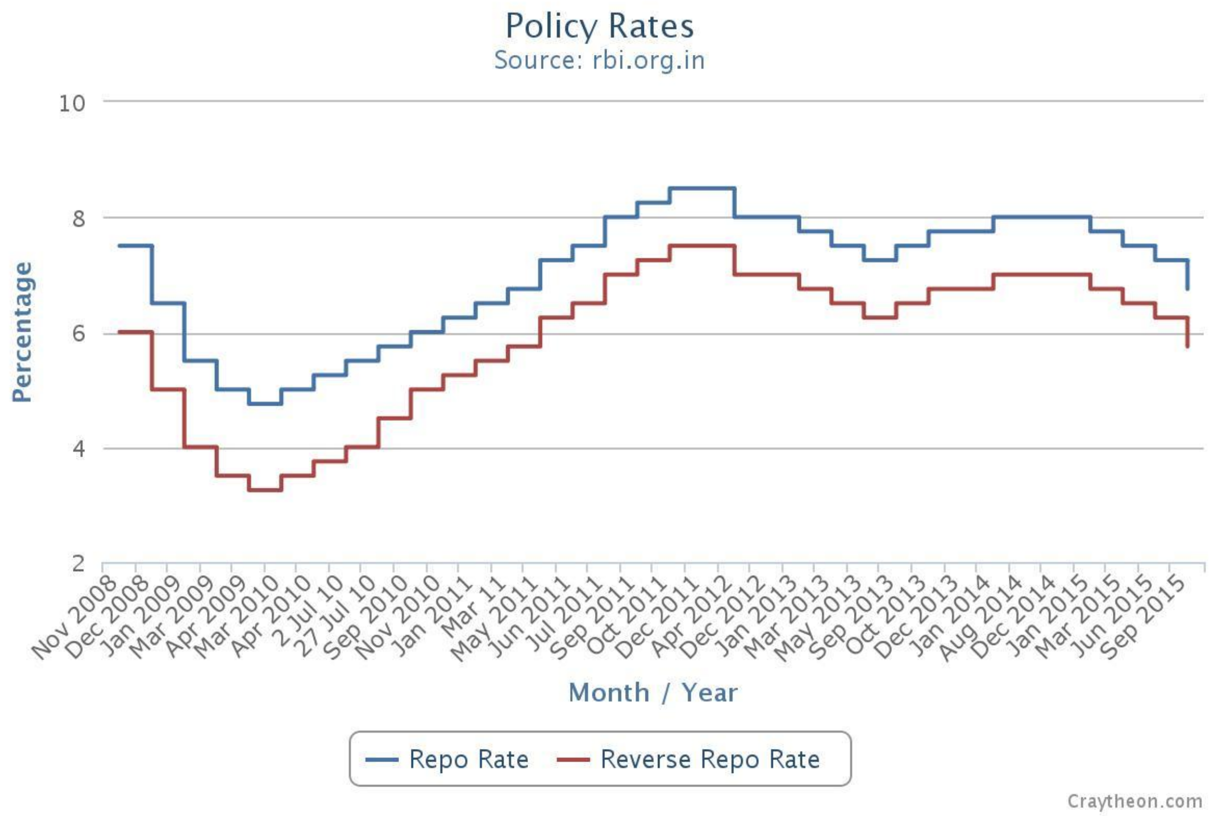
## 7. HYPOTHESIS

For the purpose of this study, the hypotheses framed are:

H0: There is no increase in the NPA's due to higher interest rates.

H1: Higher interest rates contribute to rising NPA's.

The study will be done at 99% significant level to either accept or reject the null hypothesis.




The repo rates havechanged on several occasions during the period 2012 to 2015. Therehas been a marginal increase in the repo rates. The rates had a steep fall from about 8% subsequently leading the interest ratestrend increase from about 5% to 8% during the period.The repo rates have been increased or decreased depending on the objectivesof the RBI at that particular point of time.

This study has been conducted to find out if there is any relation between rising interest rates andrising NPA's in the banking sector. A null hypothesis was formed stating that there is no relationbetween rising interest rates and NPA's.There could be other reasons for rising NPA's also. Rising NPA's could also be due to not sosanguine business climate, willful defaults, not so strong legal systems,weak repayment cultureamong other reasons.

**Macro Perspective behind NPAs**

A lot of practical problems have been found in Indian banks, especially in public sector banks. For Example, the government of India had given a massive wavier of Rs. 15,000 Crs. under the

Prime Ministership of Mr. V.P. Singh, for rural debt during 1989-90. Poverty elevation programs like IRDP, RREP, SUME, SEPUP, JRY, PMRY etc., failed on various grounds in meeting their objectives. The huge amount of loan granted under these schemes were totallyunrecoverable by banks due to political manipulation, misuse of funds and non-reliability of target audience of these sections. Loans given by banks are their assets and as the repayment of several of the loans were poor, the quality of these assets were steadily deteriorating.

There are several reasons for an account becoming NPA.

Internal Factors:

External Factors:

**Internal Factors:**

1. Funds borrowed for a particular purpose but not use for the said purpose.

2.Projectnot completed in time.
3. Poor recovery of receivables.
4. Excess capacities created on non-economic costs.
5. In-ability of the corporate to raise capital through the issue of equity or other debt instrument from capital markets.
6. Business failures.
7. Diversion of funds for expansion\modernization\setting up new projects\ helping or promoting sister concerns.
8. Willful defaults, siphoning of funds, fraud, disputes, management disputes, misappropriation etc.,
9. Deficiencies on the part of the banks viz. in credit appraisal, monitoring and follow-ups, delay in settlement of payments\ subsidiaries by government bodies etc.

**External factors:**

1. Sluggish legal system -

- Long legal tangles
- Changes that had taken place in labour laws
- Lack of sincere effort.

2. Scarcity of raw material, power and other resources.
3. Industrial recession.
4. Shortage of raw material, raw material\input price escalation, power shortage, industrial recession, excess capacity, natural calamities like floods, accidents.
5. Failures, nonpayment\ over dues in other countries, recession in other countries, externalproblems, adverse exchange rates etc.
6. Government policies like excise duty changes, Import duty changes etc.

| **Causes for an Account becoming NPA** | | |
|---|---|---|
| **Those Attributable** to Borrower | **Causes Attributable to Banks** | **Other Causes** |
| a) Failure to bring in Required capital<br>b) Too ambitious project<br>c) Longer gestation period<br>d) Unwanted Expenses<br>e) Over trading<br>f) Imbalances of inventories<br>g) Lack of proper planning<br>h) Dependence on single customers<br>i) Lack of expertise<br>j) Improper working Capital Mgmt.<br>k) Mismanagement<br>l) Diversion of Funds<br>m) Poor Quality Management<br>n) Heavy borrowings<br>o) Poor Credit Collection<br>p) Lack of Quality Control | a) Wrong selection of borrower<br>b) Poor Credit appraisal<br>c) Unhelpful in supervision<br>d) Tough stand on issues<br>e) Too inflexible attitude<br>f) Systems overloaded<br>g) Non inspection of Units<br>h) Lack of motivation<br>i) Delay in sanction<br>j) Lack of trained staff<br>k) Lack of delegation of work<br>l) Sudden credit squeeze by banks<br>m) Lack of commitment to recovery<br>n) Lack of technical, personnel & zeal to | a) Lack of Infrastructure<br>b) Fast changing technology<br>c) Un helpful attitude of Government<br>d) Changes in consumer preferences<br>e) Increase in material cost<br>f) Government policies<br>g) Credit policies<br>h) Taxation laws<br>i) Civil commotion<br>j) Political hostility<br>k) Sluggish legal system<br>l) Changes related to Banking amendment Act |

The banking sector's asset quality woes further worsened in the last one year, (Below mentioned chart)with gross non-performingasset (GNPA) ratio inching to 4.45 per cent as on March 15 this year, as compared to 4.1 per cent in March 2014, according to the latest data released by the Reserve Bank of India (RBI).

However, there are some indications that asset quality might have stabilized in the last six months of 2014-15; GNPA was 4.5 per cent as on September-end.

Stressed assets ratio, which is GNPA plus restructured standard advances for the system, stood at 10.9 per cent, as at the end of March, 2015 as compared to 10 per cent in March, 2014 and 10.7 per cent in September 2014.

GNPAs for public sector banks as on March 2015 stood at 5.17 per cent, while the stressed assets ratio stood at 13.2 per cent, which is nearly 230 bps more than that for the system.

The central bank had taken various steps in the last one year to tackle the problem of rising bad loans. For early recognition of stress in the system, banks have been asked to form joint lenders' forum (JLF) to initiate the resolution mechanism. The deputy governor admitted that the implementation of JLF framework needs further improvement on the ground level.

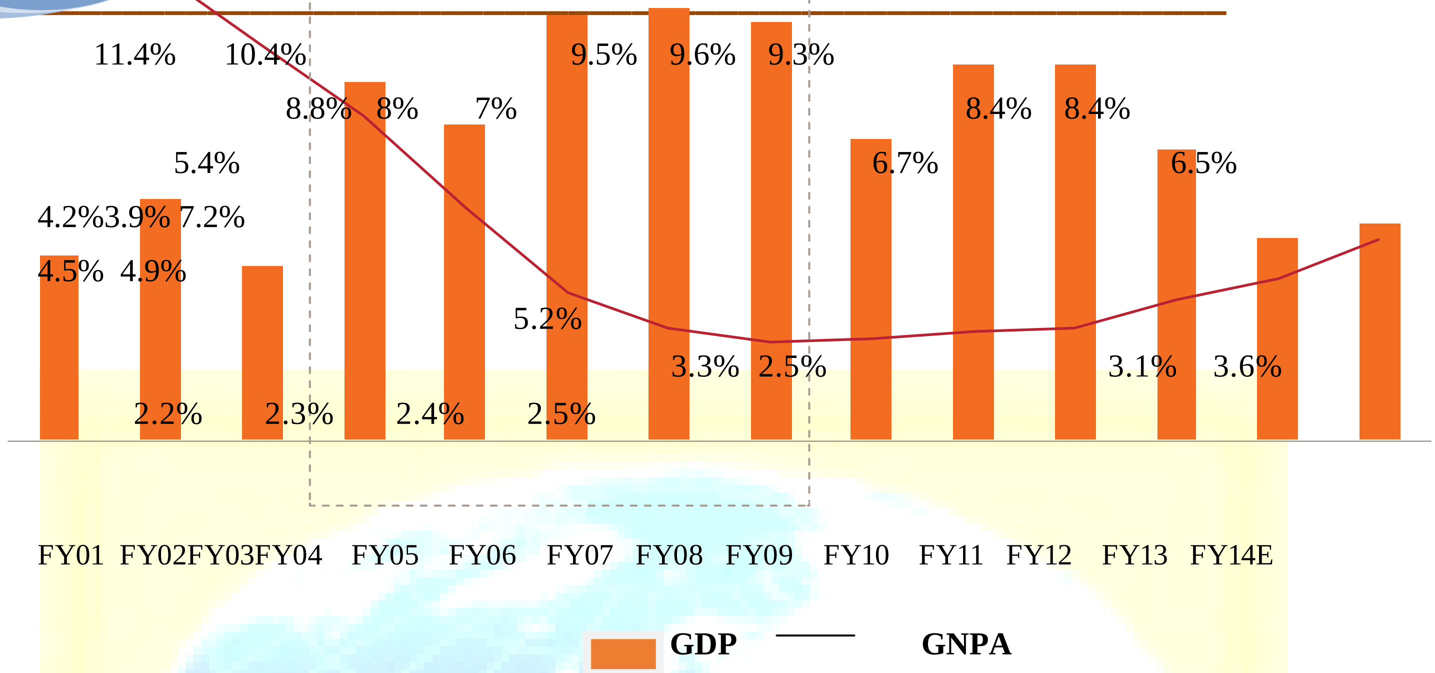
**LOAN BOOK (%)**

| | Mar '13 | Mar '14 | Mar '15 |
|---|---|---|---|
| Gross NPAs | 3.4 | 4.1 | 4.45 |
| Net NPAs | - | 2.2 | 2.36 |
| Overall stressed advances | 9.2 | 10 | 10.9 |

Note: NPA is non-performing assets; NPAs are % of corresponding advances; stressed advances are % of gross advances
Source: RBI

GrossNPA vs. GDP in India (Mention Scale)

IJMIE Volume 6, Issue 7 ISSN: 2249-0558




*Source: Trends in Indian banking sector, Reserve Bank of India*

SUMMARY OUTPUT

| *Regression Statistics* | |
|---|---|
| Multiple R | 0.802361 |
| R Square | 0.643783 |
| Adjusted R Square | 0.599256 |
| Standard Error | 0.155288 |
| Observations | 10 |

ANOVA

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| Regression | 1 | 0.348652 | 0.348652 | 14.45825 | 0.005218789 |
| Residual | 8 | 0.192915 | 0.024114 | | |
| Total | 9 | 0.541568 | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
|---|---|---|---|---|---|---|---|---|
| Intercept | 10.84813 | 0.100305 | 108.1517 | 0.000000 | 10.61682223 | 11.07943 | 10.61682 | 11.0794 |
| GNPA | -8.41938 | 2.214227 | -3.8024 | 0.005219 | -13.52539572 | -3.31336 | -13.5254 | -3.3133 |

*A regression and Correlation test was run using ANNOVA which signifies inverse correlation between GDP and GNPAs which is significant at 1% level. Hence it's signifies rejection level.*

**NPA lifecycle in banks**

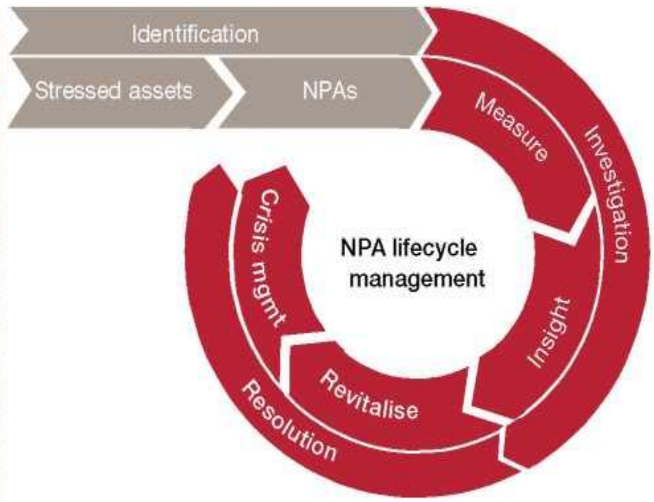
The NPA lifecycle of banks has three main stages: Identification of stressed assets and NPAs, investigation by measurement and obtaining insight and lastly, resolution through crisis management and revitalization of stressed assets. In India, RBIhas taken a number of steps which are pushing banks in India to be more proactive in recognition of stress and to take remedial steps so as to preserve the economic value of assets. As a part of such efforts, special mention accounts (SMAs) classification has been recently introduced coupled with defining a timebound procedure towards deciding the course and nature of remedial actions.

The RBI, in addition, is also strengthening the NPA resolution ecosystem in India including increase in foreign participation rules in ARCs in India and bringing a sunset clause to the regulatory forbearance accorded to restructured accounts up to March 2015. There is also an increasing demand from industry to keep MSMEs out of the ambit of SMAs.

Stressed assets
- Sub-asset category (SMA) creation
- Incipient stress detection
- Provisioning acceleration
- Non- cooperative borrower identification
- Board oversight
- Formation of JLF and creation of Corrective Action Plan (CAP) and JLF
- Strategy and planning

NPA
- Identification of default borrowers
- Classification of NPAs
- Record of recovery monitoring
- Assessment of collaterals and degree of credit weakness

Measure
- Consolidate and apply income recognition policy
- Execute write offs and appropriation of P&L
- Regulatory reporting
- Management reporting




Crisis management
- Takeover of assets
- Cash flow management
- Interim management
- Turnaround planning and implementation

Revitalise
- Implement CAP for stressed assets
- Restructuring of NPAs
- Sale or divesture of business
- Application of new equity fund
- Change management

Insight
- Forecasting
- Business activity monitoring/alerting
- Investigation of intent and business rational of default borrowers
- Policy and process Review

KEY ENABLERS:

| Regulatory framework | internal policies | Business models | Technology | Process |
|---|---|---|---|---|

Source: www.pwc.in

| COMPOSITION OF NPAs OF PUBLIC SECTOR BANKS - 2004 TO 2013 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | (Rs.Billion) |
| | As on March 31 | | | | | | | |
| Bank Name | Year | Priority Sector | | Non Priority Sector | | Public Sector | | Gross NPAs |
| | | Amount | Percent Share | Amount | Percent Share | Amount | Percent Share | Amount |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Nationalized Banks | 2004 | 167.05 | 47.74 | 178.95 | 51.14 | 3.90 | 1.11 | 349.90 |
| | 2005 | 163.81 | 51.17 | 153.46 | 47.94 | 2.83 | 0.88 | 320.09 |
| | 2006 | 151.24 | 53.66 | 122.53 | 43.48 | 8.08 | 2.87 | 281.85 |
| | 2007 | 157.79 | 61.28 | 96.68 | 37.55 | 3.02 | 1.17 | 257.49 |
| | 2008 | 163.85 | 67.21 | 77.93 | 31.96 | 2.02 | 0.83 | 243.80 |
| | 2009 | 157.21 | 60.10 | 101.40 | 38.76 | 2.97 | 1.13 | 261.58 |
| | 2010 | 199.06 | 56.13 | 152.77 | 43.08 | 2.80 | 0.79 | 354.62 |
| | 2011 | 257.21 | 59.90 | 169.47 | 39.47 | 2.73 | 0.64 | 429.40 |
| | 2012 | 322.90 | 48.34 | 343.13 | 51.37 | 1.92 | 0.29 | 667.95 |
| | 2013 | 404.86 | 42.21 | 553.59 | 57.71 | 0.78 | 0.08 | 959.22 |
| SBI Group | 2004 | 71.36 | 47.07 | 78.03 | 51.48 | 2.20 | 1.45 | 151.59 |
| | 2005 | 70.17 | 47.39 | 76.24 | 51.48 | 1.68 | 1.13 | 148.08 |
| | 2006 | 72.50 | 54.95 | 58.19 | 44.10 | 1.25 | 0.95 | 131.93 |
| | 2007 | 71.75 | 57.15 | 51.93 | 41.36 | 1.88 | 1.50 | 125.56 |
| | 2008 | 89.02 | 58.49 | 62.22 | 40.88 | 0.97 | 0.63 | 152.20 |
| | 2009 | 84.47 | 47.26 | 92.50 | 51.75 | 1.77 | 0.99 | 178.74 |
| | 2010 | 109.40 | 50.11 | 106.46 | 48.77 | 2.44 | 1.12 | 218.31 |
| | 2011 | 155.67 | 55.32 | 125.67 | 44.66 | 0.06 | 0.02 | 281.40 |
| | 2012 | 239.11 | 52.33 | 217.59 | 47.62 | 0.25 | 0.05 | 456.94 |
| | 2013 | 264.42 | 44.09 | 334.94 | 55.85 | 0.31 | 0.05 | 599.67 |
| Public Sector Banks | 2004 | 238.40 | 47.54 | 256.98 | 51.24 | 6.10 | 1.22 | 501.48 |
| | 2005 | 233.97 | 49.98 | 229.69 | 49.06 | 4.50 | 0.96 | 468.17 |
| | 2006 | 223.74 | 54.07 | 180.72 | 43.68 | 9.32 | 2.25 | 413.78 |
| | 2007 | 229.54 | 59.92 | 148.61 | 38.80 | 4.90 | 1.28 | 383.05 |
| | 2008 | 252.87 | 63.85 | 140.15 | 35.39 | 2.99 | 0.75 | 396.00 |
| | 2009 | 241.68 | 54.89 | 193.90 | 44.04 | 4.74 | 1.08 | 440.32 |
| | 2010 | 308.46 | 53.84 | 259.23 | 45.25 | 5.24 | 0.91 | 572.93 |
| | 2011 | 412.87 | 58.09 | 295.15 | 41.52 | 2.78 | 0.39 | 710.80 |
| | 2012 | 562.01 | 49.96 | 560.71 | 49.85 | 2.17 | 0.19 | 1,124.89 |
| | 2013 | 669.28 | 42.93 | 888.53 | 57.00 | 1.08 | 0.07 | 1,558.90 |
| *Source: Department of Banking Supervision, RBI* | | | | | | | | |

Bank Rate

| | | |
|---|---|---|
| **30-Oct-2002** | **6.25** | RBI circular dated 29/10/2002 |
| **29-Apr-2003** | **6.00** | RBI circular dated 29/04/2003 |
| **13-Feb-2012** | **9.50** | **RBI circular dated 13/02/2012** |
| **17-April-2012** | **9.00** | RBI circular dated 17/04/2012 |
| **29-January-2013** | **8.75** | RBI circular dated 29/01/2013 |
| **19 - March 2013** | **8.50** | RBI circular dated 19/03/2013 |
| **03 - May 2013** | **8.25** | RBI circular dated 3/5/2013 |
| **15 - July 2013** | **10.25** | |
| **20 - September 2013** | **9.50** | RBI circular dated 20/09/2013 |
| **07 - October, 2013** | **9.00** | RBI circular dated 07/10/2013 |
| **29 - October, 2013** | **8.75** | RBI circular dated 29/10/2013 |

| **REPO RATE w.e.f. (Since 2005)** | **Rate %** | **RBI Reference** |
|---|---|---|
| **26-Oct-2005** | **6.25** | |
| **24-Jan-2006** | **6.50** | |
| **8-Jun-2006** | **6.75** | |
| **25-Jul-2006** | **7.00** | |
| **30-Oct-2006** | **7.25** | |
| **31-Jan-2007** | **7.50** | |
| **30-Mar-2007** | **7.75** | |
| **12-Jun-2008** | **8.00** | **RBI circular dated 11/6/2008** |
| **25-Jun-2008** | **8.50** | **RBI circular dated 24/06/2008** |
| **30-Jul-2008** | **9.00** | **RBI circular dated 29/07/2008** |
| **20-Oct-2008** | **8.00** | **RBI circular dated 20/10/2008** |
| **3-Nov-2008** | **7.50** | **RBI circular dated 3/11/2008** |
| **8-Dec-2008** | **6.50** | **RBI circular dated 6/12/2008** |
| **5-Jan-2009** | **5.50** | **RBI circular dated 2/01/2009** |
| **5-March-2009** | **5.00** | **RBI circular dated 4/03/2009** |
| **21-April-2009** | **4.75** | **RBI circular dated 21/04/2009** |
| **19-March-2010** | **5.00** | **RBI circular dated 19/03/2010** |
| **20-Apr-2010** | **5.25** | **RBI circular dated 20/04/2010** |
| **02-July-2010** | **5.50** | **RBI circular dated 02/07/2010** |

| | | |
|---|---|---|
| **27-July-2010** | **5.75** | **RBI circular dated 27/07/2010** |
| **16-Sept-2010** | **6.00** | **RBI circular dated 16/09/2010** |
| **02-Nov-2010** | **6.25** | **RBI circular dated 02/11/2010** |
| **25-January-2011** | **6.50** | **RBI circular dated 25/01/2011** |
| **17-March-2011** | **6.75** | **RBI circular dated 17/03/2011** |
| **03-May-2011** | **7.25** | **RBI circular dated 03/05/2011** |
| **16-June-2011** | **7.50** | **RBI circular dated 16/06/2011** |
| **26-July-2011** | **8.00** | **RBI circular dated 26/07/2011** |
| **16-September-2011** | **8.25** | **RBI circular dated 16/09/2011** |
| **25 October-2011** | **8.50** | **RBI circular dated 25/10/2011** |
| **17-April-2012** | **8.00** | **RBI Circular dated 17/04/2012** |
| **29-January-2013** | **7.75** | **RBI Circular dated 29/01/2013** |
| **19 - March 2013** | **7.50** | **RBI Circular dated 19/03/2013** |
| **3 - May 2013** | **7.25** | **RBI circular dated 3/5/2013** |
| **20 - September- 2013** | **7.50** | **RBI circular dated 20/9/2013** |
| **29 - October- 2013** | **7.75** | **RBI circular dated 29/10/2013** |
| **18 - December- 2013** | **7.75** | **RBI circular dated 18/12/2013** |

Correlation Test

| | *NB* | *SBI* | *PSB* | *Repo Rate* | *Bank Rate* |
|---|---|---|---|---|---|
| NB | 1 | | | | |
| SBI | 0.9806495 | 1 | | | |
| PSB | 0.99672 | 0.993276 | 1 | | |
| Repo Rate | 0.39532444 | 0.406112 | 0.40165 | 1 | |
| Bank Rate | 0.90798666 | 0.923696 | 0.918764 | 0.476729 | 1 |

From The above table Bank rate, Repo rate and NPAs it can be observed that as the interest rate increases Gross NPAs have increased. Data is analyzed usingCorrelation test which signifies strong correlation between Bank rate and Gross NPAs and a weak correlation between Repo rate and Gross NPAs.

**Measures to control NPAS Menace**

It is proved beyond doubt that NPA in bank ought to be kept at the lowest level. This can be possible only with the following Measures listed below:

**Credit Assessment and Risk Management**

A lasting solution to the problem of NPAs can be achieved only with proper credit assessment and risk management mechanism. The documentation of credit policy and credit audit immediately after the sanction is necessary to upgrade the quality of credit appraisal in banks.

**Credit Appraisal Standards**:

**a) Qualitative**:

At the outset, the proportion is examined from the angle of visibility and also from the Bank's prudential levels of exposure to the borrower, Groups and industry. Thereafter, a view is taken about the past experience the bank has with promoters, if there is a track record to go by. Where it is a new connection for the bank but the entrepreneurs are already in business, opinion reports from existing bankers and published data if available are carefully perused.

**b) Quantitative**:

The basic quantitative parameters underpinning the bank's credit appraisal for working capital are as follows:-

**(i)Liquidity**:

Current Ratio (CR) of 1.5 is generally considered as a benchmark level of liquidity.

However, the approach has to be flexible. CR of 1.5 is only indicative and may not be deemed as necessary .In case where the CR is projected at the level lower than the benchmark or a slippage in the CR is proposed, it alone will not be reason fir rejection of the loan proposal or for sanction of the loan at lower level.

**(ii) Net Working Capital**:

Although this is corollary of current ratio, the movements in Net Working Capital are watched to ascertain whether there is a mismatch of long term sources with respect to long term uses for purpose which may not be readily acceptable to the bank so that corrective measure can be suggested.

**(iii)Financial Soundness**

This will be dependent upon the owner's take stake or the leverage. Here again the benchmark will be different for manufacturing, trading, hire-purchase and leasing concerns. For industrial venture a total external Liability/ Tangible Net Worth ratio of 3.0 is reasonable but deviation in selective cases for understandable reasons may be acceptable by the sanctioning authority.

**(iv) Turn-Over**:

The trend in turn-over is carefully gone into both in terms of quantity and value also market share wherever such data are available. What is more relevant is to establish a steady output if not a rising trend in quantitative terms because sales realization may be varying on account of price fluctuations.

**(v) Profits:**

While net profit is the ultimate yardstick, cash accruals, i.e., profit before depreciation and taxation conveys a more comparable picture in view of changes in rate of depreciation and taxation which may have taken place in the intervening years.

**(vi)Credit Rating:**

Wherever the company has been rated by a Credit Rating Agency for any instrument such as CP/FD, this will be taken into account while arriving at a final decision. However, as the credit rating involves additional expenditure, the banks do not normally insist on this and only use this tool if such an agency had already looked into the company finances.

**(vii) Capital Markets**:

Where the Company's shares are listed on stock exchange, the movement of the price of its share, the market value of shares vis-à-vis those of competitors in the same industry, response to public/rights issues are also kept in view as these are reflective of the corporate image in the eyes of the investor's community.

**(viii) Term Loan/Deferred payment guarantee**:

(i) In case of term loans and deferred payment guarantees, the project report is obtained from the customer which may have been compiled either in-house or by a firm of Consultants/merchant bankers. The technical and economic viability is vetted by the Bank and wherever it is felt necessary, the Credit Officer would seek the benefit of a second opinion either from the Bank's Technical Consultancy cell or from the consultants of the Bank.

(ii) Promoter's contribution of at least 20% in the total equity is what banks normally expect, but the promoter's contribution may vary largely in mega projects. Therefore, there cannot be a definitive benchmark. The sanctioning authority will have the necessary discretion to permit deviations.

(iii) The other basic parameter would be the net debt service coverage ratio i.e. exclusive of Interest payable, which should normally not go below 2. On a gross basis DSCR should not be below 1.75. These ratios are indicative and deviations may be permitted selectively by the sanctioning authority.

**(ix) Lending to Non-Banking Financial Companies (NBFCs):**

RBI have been issuing guidelines from time to time regarding lending by banks to NBFCs, in order to ensure their healthy and orderly functioning and growth. In the context of mandatory registration with RBI, PRESCRIBED for all NBFCs under provisions of the RBI Act, in May 1999, RBI removed the ceiling on bank credit linked to Net Owned Funds (NOF), in respect of all NBFCs which are statutorily registered with RBI and are engaged in the principal business of Equipment Leasing (EL), Hire Purchase (HP) and Loan and Investment companies. As regards bank finance to the NBFCs which do not require to be registered with RBI, banks have been permitted to take their credit decisions on the basis of purpose of credit, nature and quality of underlying assets, repayment capacity of borrowers, as also risk perception, etc…. In respect of Residuary Non-Banking Companies (RNBCs) registered with RBI, bank finance would continue to be restricted to the extent of their NOF.

**(x) Financing of infrastructure projects**:

In view of the national importance attached to infrastructure development, its criticality to Economic development of the country, the potential for large volume business and the special skills required for credit appraisal/assessment, some banks set up separate Project Finance Business Units for financing infrastructure projects.

**Early Recognition of the Problem:**

Invariably, by the time banks start their efforts to get involved in a revival process, it's too late to retrieve the situation-both in terms of rehabilitation of the project and recovery of bank's dues. Identification of weakness in the very beginning, (that is when the account starts showing first signs of weakness regardless of the fact that it may not have become NPA) is imperative. Assessment of the potential of revival may be done on the basis of techno-economic viability study. Restructuring should be attempted where, after an objective assessment of the promoter's intention, banks are convinced of a turnaround within a scheduled timeframe. In respect of totally unviable units as decided by the bank, it is better to facilitate winding up/selling of the unit earlier, so as to recover whatever is possible through legal means before the security position becomes worse.

**Identifying Borrowers with Genuine Intent**:

Identifying borrowers with genuine intent from those who are non-serious with no commitment or stake in revival is a challenge confronting bankers. Here the role of frontline officials at the branch level is paramount as they are the ones who have intelligent inputs with regard to promoters "Sincerity, and capability to achieve turnaround". Based on this objective assessment, banks should decide as quickly as possible whether it would be worthwhile to commit additional finance. In this regard banks may consider having "Special Investigation" of all financial transaction or business transaction, books of account in order to ascertain real factors that contributed to sickness of the borrower. Banks may have penal of technical experts with proven expertise and track record of preparing techno-economic study of the project of the borrowers.

**Timeliness and adequacy of response**:

Longer the delay in response, grater the injury to the account and the asset. Time is a crucial element in any restructuring or rehabilitation activity. The response decided on the basis of techno-economic study and promoter's commitment, has to be adequate in terms of extend of additional funding and relaxations etc. under the restructuring exercise. The package of assistance may be flexible and bank may look at the exit option.

**Focus on Cash Flows:**

While financing, at the time of restructuring the banks may be guide by the conventional fund flow analysis only, which could yield a potentially misleading picture. Appraisal for fresh credit requirements may be done by analyzing funds flow in conjunction with the Cash Flow rather than only on the basis of Funds Flow.

**Management Effectiveness:**

The general perception among borrower is that it is lack of finance that leads to sickness and NPAs. But this may not be the case all the time. Management effectiveness in tackling adverse business conditions is a very important aspect that affects borrowing unit's fortunes. A bank may commit additional finance to an ailing unit only after basic viability of the enterprise also in the context of quality of management is examined and confirmed. Where the default is due to deeper malady, viability study or investigative audit should be done- it will be useful to have consultant appointed as early as possible to examine this aspect. A proper techno-economic viability study must thus become the basis on which any future action can be considered.

**Multiple Financing:**

During the exercise for assessment of viability and restructuring, a Pragmatic and unified approach by all the lending banks/Fls as also sharing of all relevant information on the borrower would go a long way toward overall success of rehabilitation exercise, given the probability of success/failure.

**Conclusions and Recommendations**: In the last few years, as Indian Economy witnessed down turn trends, the banks have been straddled with high NPAs and restructured assets. Macro-economic dynamics may be a major contributor, however as in adequate credit assessments and monitoring during the upturn in the economy has also contributed to the same. There's has been considerably change in Interest rate and there's impact on Interest rate and GDP due to NPAs.

**Some of the important recommendations include the following**:

- Effective and early use of warning systems as the monitoring mechanism level by the banks to proactively detect and resolve issues related to the credit risk of the borrower. For the resolution of NPAs, an end NPA lifecycle management can also help in the improvement.
- To create an overall regulatory frame work for credit rating with an umbrella regulator.
- To reduce the opportunity of regulatory arbitrage.

**References:**


- Reddy, YV,(2004), Credit Policy, Systems and Cultural, Vinimaya, Vol25(1)
- Ken Black, 2007. Business Statistics for Contemporary Decision Making. 4th Ed.WileyIndia.
- Levin, I.Richard and Rubin, S David, 2007. Statistics for Management. 5th ed. Pearson Education.
- Dr.G.VijayaRaghavan (2009): Bank credit Management, Himalaya publication house pvt ltd.
- ANNUAL FINANCIAL FOR THE PERIOD ENDED 31ST MARCH, 2011. http://pnbindia.in/new/Upload/English/Financials/PDFs/financial_result MARCH2011.pdf.
- Reasons for the Growth of Non-Performing Asset in India. (2011, June 17). Retrieved September 22, 2013, from Google Crome:http://gaurisankar.blogspot.in/2011/06/reasons for growth of non performing.html
- ANNUAL FINANCIAL RESULTS FOR THE PERIOD ENDED 31st MARCH, 2012. (2012, may 09). Retrieved June 15, 2013, from Google Crome:

http://pnbindia.in/new/Upload/English/Financials/PDFs/financial_results_march_2012.pdf

- http://www.researchandmarkets.com/reports/2141861/annual _reviews_of_banking_industry_2012. (2012, may). Retrieved July 15, 2013, from Google Cromehttp://www.researchandmarkets.com/reports/214861/annual_reviews_of_banking_industry2012
- Aggarwal,S.,&Mittal,P.(2012). Non Performing Assets: Comparative Position of Public and Private Sector Banks in India. International Journal of Business and Management Tomorrow.
- Akrani, G. (2011, September 09). Non-Performing Assets Meaning, Types and Causes. Retrieved September 22, 2013, from Google Crome: http://kalyancity.blogspot.com/2011/07/non performing assets npa meaning types.html.
- Consultants, D.(n.d.) Effects of NPA. Retrieved August 15, 2013, from Google Crome: http://www.npaconsultant.in/about us/effects of npa on borrowers business operation.html
- Goyal,K.A., & Joshi, V. (2012). Indian Banking Industry: Challenges and Opportunities. International Journal of Business Research and Management (IJBRM, 11).
- Gupta, R., &Sikarwar, N.S. (Mar.2013). A CASE STUDY OF RECOVERY POSITION OF NOT PERFORMING ASSESTS OF PUNJAB NATIONAL BANK OF INDIA AND HDFC BANK LIMITED. International Journal of Accounting and Financial Management Research (IJAFMR), 8
- http://www.dnb.co.in/bfsisectorinindia/BankC7.asp (n.d.). Retrieved September 22, 2013, from google crome: http://www.dnb.co.in/bfsisectorinindia/BankC7.asp
- IndiaInfoline.com. (2012, July30). Punjab National bank Detailed Annual Results (2001-2012). Retrieved June 25, 2013, from Google Crome: http://www.indiainfoline.com/Markets/Company/Fundamentals/Past
- Obuah, E.(2010). Moving Africa toward Sustainable Growth and Technological Development. International academy of African Business & Development, (p.778) Nigeria.

- Parsad, K.R., & Reddy, B.R.(November 2012). Management of Non-Performing Assets in Andhra bank. Indian Journal of Applied Research, 13.
- SIKARWAR, R.G., gupta, r., &Sikarar, n.s.(Mar.2013). A CASE STUDY OF RECOVERY POSITION OF NON PERSORMING ASSETS OF PUNJAB. p.8.
- Siraz, K.K., &&pillai, D.S.(2013). A Study on the performance of Non-Performing Assets (NPAs) of Indian Banking during Post Millennium Period International Journal of Business and Management Tomorrow, 12.